```
FILE 'HOME' ENTERED AT 20:28:46 ON 21 APR 2002)
     FILE 'CAPLUS' ENTERED AT 20:29:13 ON 21 APR 2002
             33 S 104987-12-4/PREP
L1
             5 S 137071-32-0/PREP
L2
             38 S L1 OR L2
L3
         262460 S UREA OR (INORGANIC SALT?) OR GLYCOLIC OR LACTIC OR LACTAMIDE
L4
L5
             3 S SOLDIUM CHLORIDE
         341520 S L4 OR ( SODIUM CHLORIDE)
_{
m L6}
             1 S L3 AND L6
L7
         268387 S UREA OR (INORGANIC (3A) SALT?) OR GLYCOLIC OR LACTIC OR LACTA
L8
         347291 S L8 OR ( SODIUM CHLORIDE)
L9
          9464 S L9 AND (HYDROCARBON OR PETROLATUM OR WAX OR PARAFFIN)
L10
             0 S L10 AND L3
L11
                S 104987-12-4/REG#
     FILE 'REGISTRY' ENTERED AT 20:38:09 ON 21 APR 2002
             1 S 104987-12-4/RN
L12
     FILE 'CAPLUS' ENTERED AT 20:38:09 ON 21 APR 2002
L13
            235 S L12
                S 137071-32-0/REG#
     FILE 'REGISTRY' ENTERED AT 20:38:22 ON 21 APR 2002
             1 S 137071-32-0/RN
L14
     FILE 'CAPLUS' ENTERED AT 20:38:23 ON 21 APR 2002
L15
            33 S L14
L16
            258 S L13 OR L15
              1 S L16 AND L10
L17
                S CYCLOSPORIN OR 104987-11-3/REG#
     FILE 'REGISTRY' ENTERED AT 20:44:44 ON 21 APR 2002
L18
             1 S 104987-11-3/RN
     FILE 'CAPLUS' ENTERED AT 20:44:44 ON 21 APR 2002
L19
          3393 S L18
L20
          14257 S CYCLOSPORIN OR L19
              7 S L20 AND L10
L21
     FILE 'USPATFULL' ENTERED AT 20:47:44 ON 21 APR 2002
          3506 S L12 OR L13 OR L20
L22
L23
          1165 S L22 AND L10
L24
           116 S L12
L25
           116 S L13
L26
           116 S L24 OR L25
           116 S L13
L27
            0 S 104987-12-4
L28
           114 S 104987-12-4/RN
L29 ·
L30
             7 S 137071-32-0/RN
L31
           278 S PIMECRILIMUS OR DESOXYAŞCOMYCIN OR ASCOMYCIN OR FR520 OR FK52
L32
            282 S L31 OR L29 OR L30
            144 S L32 AND L10
L33
L34
             9 S L32 (2S) (L6)
         324207 S (HYDROCARBON OR PETROLATUM OR WAX OR PARAFFIN)
L35
L36
             1 S L34 (2S) L35
              1 S L34 (5S) L35
L37
L38
              7 S L34 AND L35
=> save all
ENTER NAME OR (END):109871367/1
L# LIST L1-L38 HAS BEEN SAVED AS 'L09871367/L'
```

=> save 132 ENTER NAME OR (END):ascomycn/a ANSWER SET L32 HAS BEEN SAVED AS 'ASCOMYCN/A'

=> save 138
ENTER NAME OR (END):lascomycn/a
1ASCOMYCN/A IS NOT A VALID SAVED NAME
Enter the name you wish to use for the saved query,
answer set, or L-number list. The name must:

- 1. Begin with a letter,
- 2. Have 1-12 characters,
- 3. Contain only letters (A-Z) and numbers (0-9),
- 4. End with /Q for a query (search profile, structure, or screen set), /A for an answer set, or /L for an L-number list.
- 5. Not already be in use as a saved name,
- 6. Not be END, SAV, SAVE, SAVED
- 7. Not have the form of an L-number (Lnnn). ENTER NAME OR (END):ascomycn1/a ANSWER SET L38 HAS BEEN SAVED AS 'ASCOMYCN1/A'

- L38 ANSWER 1 OF 7 USPATFULL
- SUMM [0033] The carrier vehicle further comprises means to hinder water evaporating from the skin, e.g. hydrocarbons.

  Hydrocarbons may be selected from a group comprising
- SUMM [0034] i) petrolatum, e.g. white petrolatum, e.g. as known and commercially available from e.g. Mineral Chemie AG, Germany;
- SUMM [0035] ii) liquid **paraffin**, e.g. as known and commercially available from e.g. Mobil BP Oiltech, Switzerland;
- SUMM [0036] iii) solid **paraffin**; or microcrystalline **wax**, e.g. as known and commercially available under the trade name Esma.RTM. M from Schlter, Germany; and
- SUMM [0037] iv) a reaction product of a **paraffin** and a polyethylene, e.g. a polyethylene having a molecular weight of from 10000 to about 400000 Daltons, e.g. 21000 Daltons, e.g. as known under the name Hydrophobes Basisgel DAC and commercially available under the trade name Plastibase.RTM., from e.g. Hansen & Rosenthal, Germany (Fiedler, H. P., loc. cit, 2, p. 1198).
- SUMM [0039] **Hydrocarbons** may be present in amount of from 70 to about 95%, preferably of from 75 to about 90%, more preferably about 85% by weight based on the total weight of the composition.
- SUMM [0040] The amount and the type of **hydrocarbons** in the composition may depend on the desired viscosity of the composition as is conventional.
- SUMM [0041] Preferably the ascomycin and the **hydrocarbon** are present in a weight ratio of 0.05 to 3:70 to 95, more preferably in a weight ratio of 0.1 to 2:75 to 90, even more preferably in a weight ratio of 0.4 to 1: about 85.
- SUMM [0044] (ii) a hydrocarbon.
- SUMM [0049] i) liquid waxes, e.g. natural-, synthetic-, semisynthetic- or emulsifying-waxes. Preferably isopropyl myristate, e.g. as known and commercially available from Henkel, Germany; oleyl erucate, e.g. as known and commercially available under the trade name Cetiol.RTM. J600 from e.g. Henkel, Germany; diisopropyl adipate, e.g. as known and commercially available under the trade name Isopat.RTM. 1794 from e.g. Dargoco, Germany; and/or oleyl oleate, e.g. as known and commercially available under the trade name Cetiol.RTM. from e.g. Henkel, Germany, may be used;
- SUMM [0062] Preferably the ascomycin, the urea, the hydrocarbon and the liquid means, when present, are present in a weight ratio of 0.05 to 3:0.1 to 20:70 to 95:1 to 15, more preferably in a weight ratio of 0.1 to 2:5 to 15:75 to 90:2 to 10, even more preferably in a weight ratio of 0.4 to 1: about 5: about 85: about 5.
- SUMM [0075] vi) solid waxes, e.g. bees wax or carnauba wax; and
- SUMM [0107] For example, the composition of the invention may be obtained by suspending the ascomycin and the urea in a mixture of liquid hydrocarbons and the lipophilic or polar solvent. Solid hydrocarbons may be mixed into the suspension in conventional manner. Alternatively, the composition of the invention may be obtained by suspending the ascomycin and the urea

in a mixture of liquid hydrocarbons, solid hydrocarbons and the solvent as conventional. Other, e.g conventional, excipients may be added at the appropriate time. The utility of the compositions according to the invention can be observed in standard clinical tests such as the test set out below.

DETD [0116] An ointment is prepared having the following composition (amounts in q)

Compound A	1
Urea	10
Petrolatum	39
Wax, microcrystalline	10
Paraffin, liquid	35
Isopropyl myristate	5
Total	100

DETD [0117] The composition is prepared by suspending Compound A and urea in liquid paraffin and isopropylmyristate and heating to about 70.degree. C. White petrolatum and microcrystalline wax are heated to about 85.degree. C., cooled to about 70.degree. C. and slowly added to the ascomycin mixture. The composition is then cooled to room temperature. An ointment is formed.

DETD [0120] An ointment is prepared having the same composition as in Example 1.1. The composition is prepared by heating liquid paraffin, microcrystalline wax, white petrolatum and isopropylmyristate to about 85.degree. C., cooling to about 70.degree. C. and suspending Compound A and urea in the mixture obtained. The composition is then cooled to room temperature. An ointment is formed.

	Examp	le				
	2	3	4	5	6	7
Compound A	1	0.1	1	2	2	1.5
Means to retain water i	n the o	uter skin	layer			
Urea	5	0.1	10	7.5	10	2
Means to hinder water e	evaporat					
Petrolatum	44	99.8	84	85.5	86	73
<b>Wax</b> , microcryst.	10					
Paraffin, liquid	35					20
Liquid means	_					
Isopropyl myristate	5					
Diisopropyl adipate			5			
Oleyl erucate				 r		3.5
Oleylalcohol			<del></del>	5		
Propylene glycol	100	100	100	100	2 100	100
Total	100	100	100	100	100	100
	Examp	ا م				
	8	9	10	11	12	13
	O	J	10	11	12	10
Cómpound A	1	1	0.2	0.5	0.5	1
Means to retain water i	n the o	uter skin	ı layer			
Urea		<del></del>	<del></del>	10	3	10
Sodium lactate	5					
Sodium chloride		15			3	
Sodium 2-pyrrolidone-		~-	2			
5-carboxylate						
Means to hinder water e		ing from		C1 5	07.5	. 07
Petrolatum	69		75.8		87.5	87
Wax, microcryst.			5	2		

Paraffin, liquid	15		15			
Plastibase .RTM.		8 4				
Liquid means						
Oleyl oleate						7
Oleyl alcohol				10		
Miglyol .RTM. 812			2			
Propylene glycol				5		
Dimethyl isosorbide					2	
Thickeners						
Cetyl alcohol	5				- <b>-</b>	
Stearyl alcohol	5					
Glycerol monostearate				5		
Aerosil .RTM. 200				4		
Emulsifiers						
Sorbitan sesquioleate					5	5
Water				2		
Total	100	100	100	100	100	100
10001						

CLM What is claimed is:

- 1. A composition for topical administration of an **ascomycin** for treatment of skin disorders which composition comprises a carrier vehicle comprising (i) means to retain water in the outer skin layer comprising a **urea**, an **inorganic salt**, or a carboxylic acid, and (ii) means to hinder water evaporating from the skin.
- 4. A composition as claimed in any one of claims 1 to 3 wherein the means to hinder water evaporating from the skin is a  ${\bf hydrocarbon}$
- 5. A composition as claimed in claim 4 wherein the hydrocarbon comprises petrolatum, liquid paraffin, microcrystalline wax, solid paraffin, or a reaction product of paraffin and polyethylene.
- 7. A composition as claimed in claim 6 wherein the liquid means comprises a wax, a fatty alcohol, a fatty acid, or a fatty oil.

ACCESSION NUMBER:

2001:229697 USPATFULL

TITLE:

Topical compositions comprising ascomycins

INVENTOR(S):

Kriwet, Katrin, Grenzach-Wyhlen, Germany, Federal

Republic of

Ledergerber, Dorothea, Lorrach, Germany, Federal

Republic of

Riedl, Jutta, Grenzach, Germany, Federal Republic of

NUMBER	KIND	DATE
US 2001051650	A1	20011213

PATENT INFORMATION:

US 2001-871367 A1 20010531 (9)

APPLICATION INFO.: RELATED APPLN. INFO.:

Continuation of Ser. No. WO 1999-EP9351, filed on 1 Dec

1999, UNKNOWN

	NUMBER	DATE		
MATTON:	GB 1998-26656	19981203		

PRIORITY INFORMATION: DOCUMENT TYPE:

3B 1998-26656

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

THOMAS HOXIE, NOVARTIS CORPORATION, PATENT AND TRADEMARK DEPT, 564 MORRIS AVENUE, SUMMIT, NJ,

079011027

NUMBER OF CLAIMS:

13

EXEMPLARY CLAIM: 613 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L38 ANSWER 2 OF 7 USPATFULL

SUMM

wherein aliphatic and heteroaliphatic moieties include both saturated and unsaturated straight chain, branched, cyclic, or polycyclic aliphatic hydrocarbons which may contain oxygen, sulfur, or nitrogen in place of one or more carbon atoms, and which are optionally substituted with one or more functional groups selected from the group consisting of hydroxy, C.sub.1 -C.sub.8 alkoxy, acyloxy, carbamoyl, amino, N-acylamino, ketone, halogen, cyano, carboxyl, and aryl (unless otherwise specified, the alkyl, alkoxy and acyl groups preferably contain 1-6 contiguous aliphatic carbon atoms);

SUMM Certain compounds of this invention contain substituents ("bumps") which diminish, and preferably substantially preclude, their binding to native FKBP12 or other native immunophilins but which permit binding to mutant FKBPs. Mutant FKBPs may be obtained and screened for binding to a selected multimerizing compound as described in PCT/US94/01617 and PCT/US94/08008. Multimerizing agents containing such bumps permit more selective binding to mutant FKBPs or chimeras containing engineered FKBP domains without interference by indigenous pools of FKBP12, which is desirable for certain applications, especially uses in whole organisms. Preferably the bump-containing monomers and their related multimerizing agents of this invention bind to FKBP12 and/or inhibit rotamase activity of FKBP12 at least about an order of magnitude less than any of FK506, FK520 or rapamycin. Such assays are well known in the art. See e.g. Holt et al., J. Amer. Chem Soc., supra. The diminution in inhibitory activity may be as great as about 2 orders of magnitude, and in some cases will exceed about three orders of magnitude. Useful bump substituents include but are not limited to alkyl, aryl, --O-alkyl, --O-aryl, substituted or unsubstituted amine, amide, carbamide and ureas, where alkyl and aryl are as previously defined. See e.g. PCT/US94/01617 and PCT/US94/08008.

SUMM Aliphatic and heteroaliphatic moieties include both saturated and unsaturated straight chain, branched, cyclic, or polycyclic aliphatic hydrocarbons which may contain oxygen, sulfur, or nitrogen in place of one or more carbon atoms, and which are optionally substituted with one or more functional groups selected from the group consisting of hydroxy, C.sub.1 -C.sub.8 alkoxy, acyloxy, carbamoyl, amino, N-acylamino, ketone, halogen, cyano, carboxyl, and aryl (unless otherwise specified, the alkyl, alkoxy and acyl groups preferably contain 1-6 contiguous aliphatic carbon atoms).

2000:138540 USPATFULL ACCESSION NUMBER:

Synthetic multimerizing agents TITLE:

Holt, Dennis A., Stow, MA, United States INVENTOR(S):

Keenan, Terence P., Cambridge, MA, United States

Guo, Tao, Somerset, NJ, United States

Laborde, Edgardo, Foster City, CA, United States

Yang, Wu, Chestnut Hill, MA, United States

ARIAD Gene Therapeutics, Inc., Cambridge, MA, United PATENT ASSIGNEE(S):

States (U.S. corporation)

NUMBER KIND DATE -----US 6133456 20001017 US 1997-808276 19970228 PATENT INFORMATION: 19970228 (8) APPLICATION INFO.:

Continuation-in-part of Ser. No. US 1995-793016, filed RELATED APPLN. INFO.: on 18 Aug 1995, now abandoned And Ser. No. US

1995-479694, filed on 7 Jun 1995 which is a

continuation-in-part of Ser. No. US 1994-292598, filed

on 18 Aug 1994, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Shah, Mukund J. ASSISTANT EXAMINER: Coleman, Brenda

LEGAL REPRESENTATIVE: Berstein, David L., Hausdorff, Sharon F.

NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 2733

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

# L38 ANSWER 3 OF 7 USPATFULL

SUMM Process variant b) is a cyanidation reaction. It preferably is effected in an inert solvent such as a chlorinated **hydrocarbon**, e.g. dichloromethane. The temperature preferably is about room temperature. The base is e.g. 4-dimethylaminopyridine.

The second procedure according to process variant b) is effected by reaction with thiophosgene, preferably in the presence of an acid scavenger such as 4-dimethylaminopyridine. Preferably an inert solvent such as acetonitrile is used. The temperature preferably is about room temperature. The subsequent reaction with an inorganic azide is preferably effected with sodium azide. The resultant compounds IIb are unstable and decompose already at room temperature to compounds Ib, under splitting off of nitrogen and sulfur. This reaction step preferably is effected in an inert solvent such as an aromatic hydrocarbon, e.g. benzene. Temperature preferably is elevated, e.g. about 50.degree. C.

Process variant e) is an acylation. It is preferably effected in an SUMM inert solvent such as acetonitrile. The acylating agent preferably is an activated acyl derivative, such as an acyl halogenide or anhydride. An acid scavenger such as dimethylaminopyridine or pyridine is employed. Further, a compound IIa may also be reacted with a carboxylic acid such as glycine protected at the amino moiety by e.g. tert-butoxycarbonyl, or with a compound of formula R.sub.8 R.sub.9 CHCOOH wherein R.sub.8 is protected hydroxy and R.sub.9 is hydrogen or methyl, and a carbodiimide such as N-ethyl-N'-(3-dimethylaminopropyl)carbodiimide or N,N'-dicyclo-hexylcarbodiimide, where indicated in the presence of a base, such as 4-dimethylaminopyridine, preferably in an inert solvent such as acetonitrile or in a chlorinated hydrocarbon. An amino protecting group may subsequently be split off together with any hydroxy protecting group which may be present. If in the starting compound IIa R.sub.2 is hydroxy and there is a single bond in 23,24 position, upon acylation splitting off of a water molecule in 23,24 position may occur and a compound Ie be formed wherein R.sub.2 is absent and there is a double bond in 23,24 position.

SUMM Process variant g) is a methylation. It preferably is effected in an inert solvent such as a chlorinated **hydrocarbon**, e.g. dichloromethane. The methylating agent preferably is diazomethane in the presence of e.g. borotrifluoride-etherate. Temperature preferably is from about 0.degree. to about room temperature.

DETD A solution of 2 g 24-tert-butyldimethylsilyloxy-FR 520 and 2 g 4-dimethylaminopyridine in 50 ml of acetonitrile is carefully reacted with 0.4 ml of thiophosgen and the mixture stirred for 3 hours at room temperature. The reaction mixture is poured onto a well-stirred mixture consisting of 150 ml of acetic acid ethyl ester, 40 ml of saturated aqueous sodium chloride solution and 50 ml of 2 N sodium azide solution, vigourous stirring is continued for 5 minutes and the organic phase is separated. The organic phase is then

successively washed with water, 1 N hydrochloric acid solution, water, and saturated aqueous **sodium chloride** solution, dried over sodium sulfate, filtered and concentrated under reduced pressure. The residue is taken up in about 100 ml of benzene and heated at 30-40.degree. for 2 hours. The benzene is removed under reduced pressure and the title compound is recovered from the residue as a colourless foamy resin by column chromatography over silicagel (eluant: n-hexane/acetic acid ethyl ester):

- O.5 g 24-tert-butyldimethylsilyloxy-33-cyanoxy-FK 520 (compound of Examples 7 and 8) or 33-cyanoxy-FR 520 (compound of Example 10a) is dissolved into a mixture of 50 ml of acetonitrile and 2 ml or 40% wt. aqueous hydrofluoric acid and the mixture is stirred for 2.5 hours at room temperature. The reaction mixture is then distributed between acetic acid ethyl ester and saturated aqueous sodium bicarbonate solution, the aqueous phase is discarded and the organic phase is washed with saturated aqueous sodium chloride solution, dried over sodium sulfate, filtered and concentrated under reduced pressure. The title compound is obtained as a colourless foamy resin from the residue by column chromatography over silicagel (eluant: n-hexane/acetic acid ethyl ester):
- DETD To a solution of 450 mg 24-tert-butyldimethylsilyloxy-FR
  520 and 120 mg tert-butyldimethylsilyloxy-(S)-lactic
  acid in 10 ml of dichloromethane are added at room temperature 120 mg
  N-ethyl-N'-(3-dimethylaminopropyl)carbodiimide hydrochloride and 23 mg
  dimethylaminopyridine. After 60 hours the reaction mixture is diluted
  with acetic acid ethyl ester, washed with successively 0.5 N
  hydrochloric acid and then water, dried over sodium sulfate filtered and
  the solvent is evaporated under reduced pressure. The residue is
  chromatography over silicagel (eluant: n-hexane/acetic acid ethyl ester
  2:1). The title compound is obtained as a colourless foam:
- DETD 2 g 24-tert-butyldimethylsilyloxy-FR 520 and 1 g N-methylmorpholin-N-oxide are dissolved in 100 ml of methylene chloride, reacted with 5 g molecular sieve (Molsieb 4A) and the mixture is stirred for 15 minutes at room temperature. 0.15 g tetrapropylammonium perruthenate is added and stirring is continued for 3 more hours at room temperature. The mixture is concentrated, the residue is taken up in acetic acid ethyl ester and the solution successively washed with saturated aqueous sodium hydrogen sulfite solution, saturated aqueous sodium chloride and saturated aqueous copper sulfate solution and the organic phase is dried over sodium sulfate, filtered and concentrated under reduced pressure. The title compound is obtained from the residue following column chromatographic over silicagel (eluant: n-hexane/acetic acid ethyl ester).
- DETD A solution of 1.2 g 29-des-(4-hydroxy-3-methylcyclohexyl)-29-(3-formylcyclopentyl)-FR 520 (compound of Example 12),
  1.5 g tert-butyldimethylsilyl chloride and 0.8 g imidazole in 20 ml of dry dimethylformamide is stirred for 15 hours at room temperature and thereafter partitioned between 1 N hydrochloric acid solution and acetic acid ethyl ester. The organic phase is separated, washed with saturated aqueous sodium chloride solution, dried over sodium sulfate, filtered and concentrated under reduced pressure. The title compound is obtained from the residue as a colourless foamy resin following column chromatography over silicagel (eluant: n-hexane/acetic acid ethyl ester):

ACCESSION NUMBER: 1999:67257 USPATFULL

TITLE: Heteroatoms-containing tricyclic compounds

INVENTOR(S): Baumann, Karl, Vienna, Austria Emmer, Gerhard, Vienna, Austria

PATENT ASSIGNEE(S): Novartis AG, Basel, Switzerland (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5912238 19990615 APPLICATION INFO.: US 1994-276276 19940718 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1991-697864, filed on 9 May

1991, now patented, Pat. No. US 5352671 which is a continuation-in-part of Ser. No. US 1990-609280, filed

on 5 Nov 1990, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Raymond, Richard L. LEGAL REPRESENTATIVE: Loeschorn, Carol A.

NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
LINE COUNT: 1593

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

## L38 ANSWER 4 OF 7 USPATFULL

DETD When culture N927-101SC50 was compared with FK-506 producing culture S. tsukubaensis BP-927 and **FK-520** and FK-523 producing culture S. hygroscopicus subsp. yakushimaensis BP-928 (available from

the Fermentation Research Institute in Japan), the differences are apparent (Table 1). In addition, culture S. tsukubaensis produced an orange tint of soluble pigment on yeast extract-malt extract agar, oatmeal agar, and glucose-asparagine agar; whereas S. hygroscopicus subsp. yakushimaensis produced no distinct soluble pigment. On yeast extract-malt extract agar, and inorganic salts

-starch agar, the colony reverse was brown and gray-pink, respectively, for S. tsukubaensis, but was gray to dark gray and yellow-gray to black for S. hygroscopicus subsp. yakushimaensis.

DETD The carbon and-nitrogen sources, though advantageously employed in combination, need not be used in their pure form. Less pure materials, which contain traces of growth factors and considerable quantities of mineral nutrients, are also suitable for use. When desired, there may be added to the medium mineral salts such as sodium or calcium carbonate, sodium or potassium phosphate, sodium or potassium chloride, sodium or potassium iodide, magnesium salts, copper salts, iron salts, zinc salts, cobalt salts, and the like. If necessary, especially when the culture medium foams, a defoaming agent, such as liquid paraffin,

fatty oil, plant oil, mineral oil or silicone may be added.

ACCESSION NUMBER: 96:16900 USPATFULL

INVENTOR(S):

TITLE: Streptomyces braegensis strain and its cultivation in a

process for producing C.sub.9 -desoxo-FK-520 Cullen, Walter P., East Lyme, CT, United States Guadliana, Mark A., Stonington, CT, United States Huang, Liang H., East Lyme, CT, United States

Kaneda, Keiji, Chita, Japan Kojima, Nakao, Nagoya, Japan

Kostek, Gloria, Preston, CT, United States

Nishiyama, Satoshi, Chita, Japan Yamauchi, Yuji, Handa, Japan Kojima, Yasuhiro, Nishio, Japan

Kojima, Yasuhiro, Nishio, Japan
PATENT ASSIGNEE(S): Pfizer Inc., New York, NY, United States (U.S.

corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5494820 19960227 WO 9218506 19921029 APPLICATION INFO.: US 1994-129159 19940124 (8)

WO 1992-US2324 19920327

19940124 PCT 371 date 19940124 PCT 102(e) date

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-683639, filed on 11

Apr 1991, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Marx, Irene

LEGAL REPRESENTATIVE: Richardson, Peter C., Ginsburg, Paul H., Butterfield,

Garth

NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)

LINE COUNT: 840

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

# L38 ANSWER 5 OF 7 USPATFULL

SUMM Process variant b) is a cyanidation reaction. It preferably is effected in an inert solvent such as a chlorinated **hydrocarbon**, e.g. dichloromethane. The temperature preferably is about room temperature. The base is e.g. 4-dimethylaminopyridine.

The second procedure according to process variant b) is effected by reaction with thiophosgene, preferably in the presence of an acid scavenger such as 4-dimethylaminopyridine. Preferably an inert solvent such as acetonitrile is used. The temperature preferably is about room temperature. The subsequent reaction with an inorganic azide is preferably effected with sodium azide. The resultant compounds IIb are unstable and decompose already at room temperature to compounds Ib, under splitting off of nitrogen and sulfur. This reaction step preferably is effected in an inert solvent such as an aromatic hydrocarbon, e.g. benzene. Temperature preferably is elevated, e.g. about 50.degree. C.

Process variant e) is an acylation. It is preferably effected in an SUMM inert solvent such as acetonitrile. The acylating agent preferably is an activated acyl derivative, such as an acyl halogenide or anhydride. An acid scavenger such as dimethylaminopyridine or pyridine is employed. Further, a compound IIa may also be reacted with a carboxylic acid such as glycine protected at the amino moiety by e.g. tert-butoxycarbonyl, or with a compound of formula R.sub.8 R.sub.9 CHCOOH wherein R.sub.8 is protected hydroxy and R.sub.9 is hydrogen or methyl, and a carbodiimide such as N-ethyl-N'-(3-dimethylaminopropyl)carbodiimide or N,N'-dicyclo-hexylcarbodiimide where indicated in the presence of a base, such as 4-dimethylaminopyridine, preferably in an inert solvent such as acetonitrile or in a chlorinated hydrocarbon. An amino protecting group may subsequently be split off together with any hydroxy protecting group which may be present. If in the starting compound IIa R.sub.2 is hydroxy and there is a single bond in 23,24 position, upon acylation splitting off of a water molecule in 23,24 position may occur and a compound Ie be formed wherein R.sub.2 is absent and there is a double bond in 23,24 position.

SUMM Process variant g) is a methylation. It preferably is effected in an inert solvent such as a chlorinated **hydrocarbon**, e.g. dichloromethane. The methylating agent preferably is diazomethane in the presence of e.g. borotrifluoride-etherate. Temperature preferably is from about 0.degree. to about room temperature.

DETD A solution of 2 g 24-tert-butyldimethylsilyloxy-FR 520

and 2 g 4-dimethylaminopyridine in 50 ml of acetonitrile is carefully reacted with 0.4 ml of thiophosgene and the mixture stirred for 3 hours at room temperature. The reaction mixture is poured onto a well-stirred mixture consisting of 150 ml of acetic acid ethyl ester, 40 ml of saturated aqueous sodium chloride solution and 50 ml of 2 N sodium azide solution, vigourous stirring is continued for 5 minutes and the organic phase is separated. The organic phase is then successively washed with water, 1N hydrochloric acid solution, water, and saturated aqueous sodium chloride solution, dried over sodium sulfate, filtered and concentrated under reduced pressure. The residue is taken up in about 100 ml of benzene and heated at 30.degree.-40.degree. for 2 hours. The benzene is removed under reduced pressure and the title compound is recovered from the residue as a colourless foamy resin by column chromatography over silicagel (eluant: n-hexane / acetic acid ethyl ester): 0.5 g 24-tert-butyldimethylsilyloxy-33-cyanoxy-FK 520 (compound of Examples 7 and 8) or 33-cyanoxy-FR 520 (compound of Example 10a) is dissolved into a mixture of 50 ml of acetonitrile and 2 ml of 40% wt. aqueous hydrofluoric acid and the mixture is stirred for 2.5 hours at room temperature. The reaction mixture is then distributed between acetic acid ethyl ester and saturated aqueous sodium bicarbonate solution, the aqueous phase is discarded and the organic phase is washed with saturated aqueous sodium chloride solution, dried over sodium sulfate, filtered and concentrated under reduced pressure. The title compound obtained as a colourless foamy resin from the residue by column chromatography over silicagel (eluant: n-hexane / acetic acid ethyl To a solution of 450 mg 24-tert-butyldimethylsilyloxy-FR 520 and 120 mg tert-butyldimethylsilyloxy-(S)-lactic acid in 10 ml of dichloromethane are added at room temperature 120 mg N-ethyl-N'-(3-dimethylaminopropyl)carbodiimide hydrochloride and 23 mg dimethylaminopyridine. After 60 hours the reaction mixture is diluted with acetic acid ethyl ester, washed with successively. 0.5 N hydrochloric acid and then water, dried over sodium sulfate filtered and the solvent is evaporated under reduced pressure. The residue is chromatography over silicagel (eluant: n-hexane / acetic acid ethyl-ester 2:1). The title compound is obtained as a colourless foam: 2 g 24-tert-butyldimethylsilyloxy-FR 520 and 1 g N-methylmorpholin-N-oxide are dissolved in 100 ml of methylene chloride, reacted with 5 g molecular sieve (Molsieb 4A) and the mixture is stirred for 15 minutes at room temperature. 0.15 g tetrapropylammonium perruthenate is added and stirring is continued for 3 more hours at room temperature. The mixture is concentrated, The residue is taken up in acetic acid ethyl ester and the solution successively washed with saturated aqueous sodium hydrogen sulfite solution, saturated aqueous sodium chloride and saturated aqueous copper sulfate solution and the organic phase is dried over sodium sulfate; filtered and concentrated under reduced pressure. The title compound is obtained from the residue following column chromatography over silicagel (eluant: n-hexane / acetic acid ethyl ester). A solution of 1.2 g 29-des-(4-hydroxy-3-methylcyclohexyl)-29-(3formylcyclopentyl)-FR 520 (compound of Example 12), 1.5 g tert-butyldimethylsilyl chloride and 0.8 g imidazole in 20 ml of dry dimethylformamide is stirred for 15 hours at room temperature and thereafter partitioned between 1 N hydrochloric acid solution and acetic acid ethyl ester. The organic phase is separated, washed with saturated aqueous sodium chloride solution, dried over sodium

sulfate, filtered and concentrated under reduced pressure. The title compound is obtained from the residue as a colourless foamy resin following column chromatography over silicagel (eluant: n-hexane /

acetic acid ethyl ester):
ACCESSION NUMBER: 94:86399 USPATFULL

DETD

DETD

DETD

DETD

TITLE:

Heteroatoms-containing tricyclic compounds

INVENTOR(S):

Baumann, Karl, Vienna, Austria Emmer, Gerhart, Vienna, Austria

PATENT ASSIGNEE(S):

Sandoz Ltd., Basel, Switzerland (non-U.S. corporation)

NUMBER	KIND	DATE
5352671		19941004

PATENT INFORMATION: APPLICATION INFO.:

US 1991-697864 19910509 (7)

RELATED APPLN. INFO.:

Continuation-in-part of Ser. No. US 1990-609280, filed

on 5 Nov 1990, now abandoned

		NUMBER	DATE
PRIORITY	INFORMATION:	DE 1989-3937336	19891109
		DE 1989-3938132	19891116
		DE 1989-3942831	19891223
		DE 1989-3942833	19891223
		DE 1990-4006819	19900305
DOCUMENT	TYPE:	Utility	

US

FILE SEGMENT:

PRIMARY EXAMINER:

Granted Bond, Robert T.

LEGAL REPRESENTATIVE:

Honor, Robert S., Kassenoff, Melvyn M., McGovern,

Thomas O.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

13 1,7

LINE COUNT:

1515

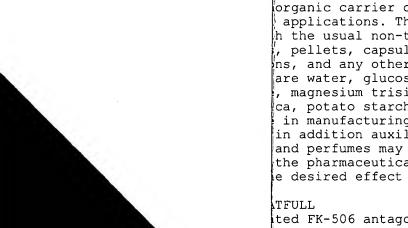
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

### L38 ANSWER 6 OF 7 USPATFULL

The carbon and nitrogen sources, though advantageously employed in combination, need not be used in their pure form, because less pure materials which contain traces of growth factors and considerable quantities of mineral nutrients, and also suitable for use. When desired, there may be added to the medium mineral salts such as sodium or calcium-carbonate, sodium or potassium-phosphate, sodium or potassium chloride, sodium or potassium iodide, magnesium salts, copper salts, cobalt salts, and the like. If necessary, especially when the culture medium foams seriously, a defoaming agent, such as liquid paraffin, fatty oil, plant oil, polypropylene glycol, mineral oil or silicone may be added.

DETD

The pharmaceutical composition of this invention can be used in the form of a pharmaceutical preparation, for example, in solid, semisolid or



C-21 hydroxylated FRn, as an active ingredient, in organic carrier or excipient suitable for applications. The active ingredient may h the usual non-toxic, pharmaceutically , pellets, capsules, suppositories, ns, and any other form suitable for use. are water, glucose, lactose, gum acacia, , magnesium trisilicate, talc, corn ca, potato starch, urea and in manufacturing preparations, in solid, in addition auxiliary, stabilizing, and perfumes may be used. The active the pharmaceutical composition in an e desired effect upon the process or

ited FK-506 antagonist o R., Gillette, NJ, United States tte, Short Hills, NJ, United States Colwell, Jr., Lawrence F., Eatontown, NJ, United States

Arison, Byron H., Watchung, NJ, United States Dumont, Francis, Rahway, NJ, United States

Merck & Co., Inc., Rahway, NJ, United States (U.S. PATENT ASSIGNEE(S):

corporation)

NUMBER KIND DATE

US 5225403 PATENT INFORMATION:

19930706 19910625 (7) US 1991-720550 APPLICATION INFO.:

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

Nutter, Nathan M. PRIMARY EXAMINER:

LEGAL REPRESENTATIVE: North, Robert J., DiPrima, Joseph F., Caruso, Charles

Μ.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

1 Drawing Figure(s); 1 Drawing Page(s) NUMBER OF DRAWINGS:

526 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

### L38 ANSWER 7 OF 7 USPATFULL

SUMM Process variant d) (reaction with N, N'-carbonyl- or N, N'thiocarbonyldiimidazole) preferably is effected in an inert solvent such as a chlorinated hydrocarbon, e.g. dichloromethane. The temperature preferably is room temperature. The imidazole preferably is added in portions.

In process variant h) (radical deoxygenation) preferably a tin hydride, SUMM especially tributyl tin hydride is used, preferably in the presence of a radical starter such as azoisobutyronitrile. Preferably the reaction is effected in an inert solvent such as an aromatic hydrocarbon, e.g. toluene. Temperatures between room temperature and the boiling point of the solvent are preferred, especially between about 80.degree. and about 110.degree. C.

DETD A solution of 1 g 33-tert-butyldimethylsilyloxy-FR520 and 2 g 4-dimethylaminopyridine in 100 ml of acetonitrile is reacted with 0.5 ml of methanesulfonic acid chloride and the mixture is stirred at room temperature for 24 hours. Then the mixture is distributed between acetic acid ethyl ester and 1N aqueous hydrochloric acid solution, the organic phase is separated, washed with saturated aqueous sodium chloride solution, dried over sodium sulfate, filtered and concentrated under reduced pressure. The title compound is obtained as a colourless foamy resin from the residue using column chromatography over silicagel (eluant n-hexane/acetic acid ethyl ester 3:1):

The starting material is obtained as follows: to a solution of 80 mg DETD FR520 in 3 ml of dichloromethane are added 15 mg imidazole and 17 mg tert-butyldimethylsilyl chloride under stirring. The reaction mixture is stirred for 2 hours at room temperature, diluted with saturated aqueous ammonium chloride solution and extracted thrice with diethyl ether. The extract is washed with water and saturated sodium chloride solution, dried over sodium sulfate, concentrated under reduced pressure and chromatographically purified.

33-0-tert-butyldimethylsilyloxy-FR520 is obtained.

93:27100 USPATFULL ACCESSION NUMBER:

Heteroatoms-containing tricyclic compounds TITLE: INVENTOR(S): Edmunds, Andrew J. F., Vienna, Austria Grassberger, Maximilian, Vienna, Austria

Sandoz, Ltd., Basel, Switzerland (non-U.S. corporation) PATENT ASSIGNEE(S):

> NUMBER KIND DATE

PATENT INFORMATION: US 5200411 US 1991-710348

19930406

APPLICATION INFO.:

19910613 (7)

RELATED APPLN. INFO.:

Continuation-in-part of Ser. No. US 1991-656046, filed

on 14 Feb 1991, now abandoned

NUMBER DATE \_\_\_\_\_\_

PRIORITY INFORMATION:

DE 1989-3919466 19890614

DE 1989-3934991 19891020

DOCUMENT TYPE:

FILE SEGMENT:

Utility Granted

PRIMARY EXAMINER:

Bond, Robert T.

LEGAL REPRESENTATIVE:

Sharkin, Gerald D., Honor, Robert S., McGovern, Thomas

Ο.

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

1,7

LINE COUNT:

1424

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
L3
RN
     137071-32-0 REGISTRY
CN 15,19 Epoxy 3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-
     tetrone, 3-[(1E)-2-[(1R,3R,4S)-4-chloro-3-methoxycyclohexyl]-1-
     methylethenyl]-8-ethyl-5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-
     hexadecahydro-5,19-dihydroxy-14,16-dimethoxy-4,10,12,18-tetramethyl-,
     (3S, 4R, 5S, 8R, 9E, 12S, 14S, 15R, 16S, 18R, 19R, 26aS) - (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
     15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-
     tetrone, 3-[2-(4-chloro-3-methoxycyclohexyl)-1-methylethenyl]-8-ethyl-
     5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-
     14,16-dimethoxy-4,10,12,18-tetramethyl-, [3S-[3R*[E(1S*,3S*,4R*)],4S*,5R*,
     8S*,9E,12R*,14R*,15S*,16R*,18S*,19S*,26aR*]]-
OTHER NAMES:
CN
     33-epi-Chloro-33-desoxyascomycin
CN Pimecrolimus
CN SDZ-ASM 981
    STEREOSEARCH
FS
     C43 H68 Cl N O11
MF
SR
     STN Files: ADISNEWS, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN, DRUGNL,
LC
       DRUGPAT, DRUGUPDATES, EMBASE, IPA, PHAR, SYNTHLINE, TOXLINE, TOXLIT,
       USPATFULL
Ring System Data
```

Analysis EA	Sequence   ES	the Rings   SZ	Ring System   Formula   RF	Identifier   RID	Occurrence   Count
C6 C5N-C5O-	C6  NC5-0C5-  NC20C130C3	6  6-6-21	,  C6	46.150.1  37331.1.1 	1

Absolute stereochemistry. Double bond geometry as described by E or Z.

```
L12 ANSWER OF
                     REGISTRY COPYRIGHT 2001 ACS
     104987-12-4 REGISTRY
     15,-19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-
     tetrone, 8-ethyl-5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-
     hexadecahydro-5,19-dihydroxy-3-[(1E)-2-[(1R,3R,4R)-4-hydroxy-3-
     methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-
     , (3S, 4R, 5S, 8R, 9E, 12S, 14S, 15R, 16S, 18R, 19R, 26aS) - (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
     15,19-Epoxy-3H-pyrido[2,1-c][1,4]oxaazacyclotricosine-1,7,20,21(4H,23H)-
     tetrone, 8-ethyl-5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-
     hexadecahydro-5,19-dihydroxy-3-[2-(4-hydroxy-3-methoxycyclohexyl)-1-
     methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-,
     [3S-[3R*[E(1S*,3S*,4S*)],4S*,5R*,8S*,9E,12R*,14R*,15S*,16R*,18S*,19S*,26aR
     *]]-
OTHER NAMES:
     Ascomycin
CN
     FK 520
     FR 520
CN
     FR 900520
CN
CN
     Immunomycin
CN
     L 683590
FS
     STEREOSEARCH
     11011-38-4, 159430-76-9, 126340-36-1, 133876-12-7, 136457-58-4,
DR
     137767-75-0, 148400-02-6
     C43 H69 N O12
MF
SR
       N Files: ADISINSIGHT, ADISNEWS, AGRICOLA, AIDSLINE, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD,
LC
     STN Files:
       CAPLUS, CASREACT, CEN, CHEMCATS, CIN, CSCHEM, DDFU, DRUGU, EMBASE,
       IFICDB, IFIUDB, MEDLINE, NAPRALERT, PHAR, PROMT, RTECS*, TOXLINE,
       TOXLIT, USPATFULL
          (*File contains numerically searchable property data)
```

Absolute stereochemistry.

Double bond geometry as described by E or Z.

```
(FILE 'HOME' ENTERED AT 20:28:46 ON 21 APR 2002)
     FILE 'CAPLUS' ENTERED AT 20:29:13 ON 21 APR 2002
L1
             33 S 104987-12-4/PREP
L2
              5 S 137071-32-0/PREP
L3
             38 S L1 OR L2
         262460 S UREA OR (INORGANIC SALT?) OR GLYCOLIC OR LACTIC OR LACTAMIDE
L4
L5
              3 S SOLDIUM CHLORIDE
L6
         341520 S L4 OR ( SODIUM CHLORIDE)
L7
              1 S L3 AND L6
         268387 S UREA OR (INORGANIC (3A) SALT?) OR GLYCOLIC OR LACTIC OR LACTA
L8
         347291 S L8 OR ( SODIUM CHLORIDE)
L9
           9464 S L9 AND (HYDROCARBON OR PETROLATUM OR WAX OR PARAFFIN)
L10
              0 S L10 AND L3
L11
                S 104987-12-4/REG#
     FILE 'REGISTRY' ENTERED AT 20:38:09 ON 21 APR 2002
             1 S 104987-12-4/RN
L12
     FILE 'CAPLUS' ENTERED AT 20:38:09 ON 21 APR 2002
L13
            235 S L12
                S 137071-32-0/REG#
     FILE 'REGISTRY' ENTERED AT 20:38:22 ON 21 APR 2002
             1 S 137071-32-0/RN
L14
     FILE 'CAPLUS' ENTERED AT 20:38:23 ON 21 APR 2002
L15
             33 S L14
            258 S L13 OR L15 `
L16
              1 S L16 AND L10
L17
                S CYCLOSPORIN OR 104987-11-3/REG#
     FILE 'REGISTRY' ENTERED AT 20:44:44 ON 21 APR 2002
             1 S 104987-11-3/RN
L18
     FILE 'CAPLUS' ENTERED AT 20:44:44 ON 21 APR 2002
L19
          3393 S L18
L20
          14257 S CYCLOSPORIN OR L19
              7 S L20 AND L10
L21
     FILE 'USPATFULL' ENTERED AT 20:47:44 ON 21 APR 2002
           3506 S L12 OR L13 OR L20
L22
           1165 S L22 AND L10
L23
           116 S L12
L24
           116 S L13
L25
L26
           116 S L24 OR L25
           116 S L13
L27
L28
             0 S 104987-12-4
L29
           114 S 104987-12-4/RN
             7 S 137071-32-0/RN
L30
            278 S PIMECRILIMUS OR DESOXYASCOMYCIN OR ASCOMYCIN OR FR520 OR FK52
L31
L32
           282 S L31 OR L29 OR L30
```

=>

L33

144 S L32 AND L10

```
L21 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS
     A topical semisolid compn. is claimed for use on mucosal membranes which
AΒ
     comprises one or more hydrophilic polymers suspended in a nonaq. matrix.
     The compn. may be combined with a therapeutic agent to assist in healing
     mucosal lesions. The active agent may be a local anesthetic suitable for
     treatment of canker sores or Behcet's syndrome, a corticosteroid for
     treatment of lichen planus, or cyclosporin A, or an
     antimicrobial or antifungal agent. Thus, a formulation can be prepd.
     which contains 4-10% Carbopol, 4-10% Gantrez MS-955, 4-10% cellulose gum,
     and 70-88% white petrolatum.
ΙT
     Corn oil
     Corticosteroids, biological studies
     Glycerides, biological studies
     Olive oil
       Paraffin oils
     Peanut oil
       Petrolatum
     RL: PEP (Physical, engineering or chemical process); THU (Therapeutic
     use); BIOL (Biological study); PROC (Process); USES (Uses)
        (improved topical carriers for mucosal drug applications)
     50-21-5, Lactic acid, biological studies 50-23-7,
IT
     Hydrocortisone 53-36-1, Methylprednisolone acetate
     Cantharidin 61-12-1, Dibucaine hydrochloride
                                                     64-72-2,
     Chlortetracycline hydrochloride 64-75-5, Tetracycline hydrochloride 67-73-2, Fluocinolone acetonide 69-72-7, Salicylic acid, biological
             73-78-9, Lidocaine hydrochloride 76-25-5, Triamcinolone
     acetonide 79-57-2, Oxytetracycline 85-79-0, Dibucaine 94-09-7, Benzocaine 94-24-6, Tetracaine 136-47-0 137-58-6, Lidocaine
     382-67-2, Desoximetasone 536-43-6, Dyclonine hydrochloride 577-48-0,
     Butamben picrate 637-58-1, Pramoxine hydrochloride 638-94-8, Desonide
     1404-04-2, Neomycin 1404-26-8, Polymyxin b 1405-87-4, Bacitracin
     1405-97-6, Gramicidin 1524-88-5, Flurandrenolide 2152-44-5,
     Betamethasone valerate 2773-92-4, Dimethisoquin hydrochloride
     5593-20-4, Betamethasone dipropionate 9003-01-4, Polyacrylic acid
     9004-62-0, Natrosol 9007-20-9, Carbopol 13609-67-1, Hydrocortisone
     butyrate 22199-08-2, Silver sulfadiazine 22832-87-7, Miconazole
     nitrate '25122-46-7, Clobetasol propionate 33564-31-7, Diflorasone
     diacetate 41621-49-2, Ciclopirox olamine 51022-69-6, Amcinonide
     57524-89-7, Hydrocortisone valerate 59865-13-3, Cyclosporin a
     64211-46-7, Oxiconazole nitrate 64872-77-1, Butoconazole nitrate
                               73816-42-9, Meclocycline sulfosalicylate
     65277-42-1, Ketoconazole
     94290-13-8, Gantrez ms-955
     RL: PEP (Physical, engineering or chemical process); THU (Therapeutic
     use); BIOL (Biological study); PROC (Process); USES (Uses)
        (improved topical carriers for mucosal drug applications)
                        1996:359823 CAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
                         125:19006
                        Improved topical carriers for mucosal applications
TITLE:
                         Osborne, David W.
INVENTOR(S):
                         Virotex Corporation, USA
PATENT ASSIGNEE(S):
SOURCE:
                         PCT Int. Appl., 11 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:
                         Patent
LANGUAGE:
                         English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
                    KIND DATE
                                          APPLICATION NO. DATE
     PATENT NO.
                                           _____
     -----
     WO 9609829 A1 19960404 WO 1995-US12288 19950926
```

W: AU, CA, JP, KR

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE AU 9537263 A1 19960419 AU 1995-37263 19950926 PRIORITY APPLN. INFO.: US 1994-313418 19940927 WO 1995-US12288 19950926

=>

```
ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
L_5
ΑN
     2000:383981 CAPLUS
     133:34430
DN
     Topical compositions comprising ascomycins
ΤI
     Kriwet, Katrin; Ledergerber, Dorothea; Riedl, Jutta
ΙN
     Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft
PA
     m.b.H.
SO
     PCT Int. Appl., 23 pp.
     CODEN: PIXXD2
DT
     Patent
LĄ
     English
     ICM A61K047-44
IC
     ICS A61K031-445
     63-6 (Pharmaceuticals)
CC
FAN.CNT 1
                         KIND DATE
                                                APPLICATION NO. DATE
     PATENT NO.
      ____ ___
                                               WO 1999-EP9351
     WO 2000032234
                                20000608
                                                                    19991201
ΡI
                         Α1
          W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
              CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
          RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRAI GB 1998-26656
                               19981203
                         Α
     The present invention relates to a compn. for topical administration
     comprising an ascomycin and a carrier vehicle comprising means
     to retain water in the outer skin layer and means to hinder water evapg.
     from the skin. A compn. was prepd. contg. 33-epichloro-33-desoxyascomycin 1, urea 10, petrolatum 39, wax 10, liq. paraffin 35, and iso-Pr myristate
     5 g.
ST
     ascomycin topical compn
IT
     Alcohols, biological studies
     RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (fatty; topical compns. comprising ascomycins)
IT
     Fats and Glyceridic oils, biological studies
     Fatty acids, biological studies
     Paraffin oils
     Paraffin waxes, biological studies
     Waxes
     RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (topical compns. comprising ascomycins)
ΙT
     Carboxylic acids, biological studies
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (topical compns. comprising ascomycins)
TΤ
     Drug delivery systems
         (topical; topical compns. comprising ascomycins)
     57-13-6, Urea, biological studies 110-27-0, Isopropyl myristate
TT
     9002-8,8-4, Polyethylene
     RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (topical compns. comprising ascomycins)
     104987-11-3,-FK-506
                             1-04987-12-4D, Ascomycin, derivs.
TT
     137071-32-0 148147-65-3, ABT-281 148365-48-4, L-732531
                                                                          150250-95-6
     161861-05-8 273752-75-3
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
```

```
L14 ANSWER 2 OF 3 USPATFULL
     136348-15-7P 137070-80-5P, 24-Tert-Butyldimethylsilyoxy-33-
     methylthiomethoxy-FK 506 137070-83-8P, 24-Tert-Butyldimethylsilyloxy-33-
      oxo-FR 520 137070-85-0P, 33-p-Tolyloxythiocarbonyloxy-FK 506
      137070-86-1P
                   137070-88-3P 137070-89-4P
                                                 137071-01-3P
                                                               137071-02-4P
      137071-03-5P
                    137071-04-6P 137071-05-7P
                                                 137071-06-8P
                                                                137071-07-9P
      137071-08-0P
                  137071-09-1P 137071-13-7P 137071-14-8P
                                                               137071-15-9P
      137071-16-0P, 24-Methoxy-33-tert-butyldimethylsilyloxy-FK 506
      137071-17-1P 137071-18-2P, 24-Tert-Butyldimethylsilyloxy-33-oxo-FK 506
      137071-19-3P, 24-Oxo-FK 506 137071-20-6P
                                                137071-21-7P
                                                              137071-22-8P
      137071-23-9P 137071-24-0P 137071-25-1P
                                                 137071-26-2P
                                                               137071-27-3P
      137071-28-4P
                    137071-29-5P 137071-30-8P 137071-32-0P
      137071-34-2P
                    137071-36-4P 137071-38-6P 138118-01-1P
                                                               161486-41-5P
      161486-42-6P
                    161486-43-7P 161486-44-8P
                                                 161486-45-9P
                                                               161486-46-0P
      161486-47-1P 161596-28-7P 161596-29-8P 161596-32-3P,
      24-Tert-butyldimethylsilyloxy-29-Des-(4-hydroxy-3-methoxycyclohexyl)-29-
      (3-formylcyclopentyl)-FR 520
        (heteroatom-contg. macrolides and their antiinflammatory,
        immunosuppressive, and antiproliferative activity)
TΤ
      937-63-3, p-Tolyloxythiocarbonyl chloride 104987-11-3, FK 506
      104987-12-4, FR 520 104987-16-8, .DELTA.23-FK 506
      104987-25-9, 33-Tert-butyldimethylsilyloxy-FK 506 129919-88-6,
      tert-Butyldimethylsilyloxy-(S)-lactic acid 133941-74-9,
      33-Tert-butyldimethylsilyloxy-FR 520
        (heteroatom-contg. macrolides and their antiinflammatory,
        immunosuppressive, and antiproliferative activity)
ACCESSION NUMBER:
                      94:86399 USPATFULL
TITLE:
                       Heteroatoms-containing tricyclic compounds
INVENTOR(S):
                       Baumann, Karl, Vienna, Austria
                       Emmer, Gerhart, Vienna, Austria
PATENT ASSIGNEE(S):
                       Sandoz Ltd., Basel, Switzerland (non-U.S. corporation)
                           NUMBER
                                       KIND DATE
                       ------
PATENT INFORMATION:
                       US 1991-697864
                       US 5352671
                                              19941004
APPLICATION INFO.:
                                              19910509 (7)
RELATED APPLN. INFO.:
                       Continuation-in-part of Ser. No. US 1990-609280, filed
                       on 5 Nov 1990, now abandoned
                             NUMBER
                                          DATE
PRIORITY INFORMATION:
                       DE 1989-3937336
                                         19891109
                       DE 1989-3938132
                                         19891116
                       DE 1989-3942831
                                         19891223
                       DE 1989-3942833
                                         19891223
                       DE 1990-4006819
                                         19900305
DOCUMENT TYPE:
                       Utility
FILE SEGMENT:
                       Granted
PRIMARY EXAMINER:
                       Bond, Robert T.
                       Honor, Robert S., Kassenoff, Melvyn M., McGovern,
LEGAL REPRESENTATIVE:
                       Thomas O.
NUMBER OF CLAIMS:
                       13
                       1,7
EXEMPLARY CLAIM:
LINE COUNT:
                       1515
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L14 ANSWER 3 OF 3 USPATFULL
     137071-29-5P 137071-32-0P 137071-34-2P 142498-57-5P
IT
     142498-63-3P 142498-64-4P
        (prepn. and immunosuppressant activity of)
   104987-12-4 138812-76-7
       (silylation of)
```